

REMARKS

Claims 1-20 were pending in this application.

Claims 11-20 have been withdrawn as being directed to a non-elected species of claims and are hereby cancelled without prejudice or disclaimer.

Claims 1 and 3-5 have been rejected.

Claims 2 and 6-10 have been objected to.

Claim 6 has been amended as shown above.

Claims 21-30 have been added.

Claims 1-10 and 21-30 are now pending in this application.

Reconsideration and full allowance of Claims 1-10 and 21-30 are respectfully requested.

I. ALLOWABLE CLAIMS

The Applicant thanks the Examiner for the indication that Claims 2 and 6-10 would be allowable if rewritten in independent form to incorporate the elements of their respective base claims and any intervening claims. The Applicant has amended Claim 6 as shown above. The Applicant respectfully submits that Claim 6 and its dependent claims are in condition for allowance.

II. REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 1 and 3-5 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,831,276 to Gonzalez et al. ("*Gonzalez*") in view of Admitted Prior Art

("APA"). This rejection is respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. (*MPEP* § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992)). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. (*MPEP* § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984)). Only when a *prima facie* case of obviousness is established does the burden shift to the Applicant to produce evidence of nonobviousness. (*MPEP* § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993)). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the Applicant is entitled to grant of a patent. (*In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985)).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. (*In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993)). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or

suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on the Applicant's disclosure. (*MPEP* § 2142).

Gonzalez recites vertically oriented diodes used to deliver current to multi-state memory elements in a memory cell. (*Abstract*). Figures 12-17 of *Gonzalez* illustrate a "stack" diode memory cell. (*Col. 10, Lines 28-31*). Each memory cell 330 is formed in and above a container 20, which could have a triangular shape. (*Col. 10, Lines 61-67*). Inside the container 20 is a thin layer 22 of polysilicon and a thin layer 24 of a material that reduces resistance, such as TiSi_2 . (*Col. 10, Line 67 - Col. 11, Line 4*).

The cited portions of *Gonzalez* simply recite an integrated circuit that includes a container lined with a polysilicon layer 22 and a TiSi_2 layer 24. The cited portions of *Gonzalez* lack any mention of placing titanium on the polysilicon layer 22 and then heating the titanium to form TiSi_2 . In particular, the cited portions of *Gonzalez* lack any mention of applying a "layer of titanium" over a "triangularly shaped layer of polysilicon" and "heating [the] layer of titanium" to form a "triangularly shaped layer of C49 type titanium disilicon (TiSi_2)" as recited in Claim 1.

The Office Action cites *APA* as disclosing the heating of polysilicon and titanium to produce C49 type TiSi_2 . However, the Office Action does not explain how this alleged teaching in *APA* can be used in *Gonzalez*. *APA* recites how a combination of titanium and silicon may form C49 type TiSi_2 at a temperature of 600-650°C. (*Application, Par. [0028]*). However, *Gonzalez* does not recite the use of titanium over the polysilicon layer 22. Rather, *Gonzalez* recites the use of a TiSi_2 layer 24

over the polysilicon layer 22. The Office Action has not explained why a person skilled in the art would replace the TiSi_2 layer 24 of *Gonzalez* with a titanium layer so that the titanium layer and the polysilicon layer 22 could be heated to form C49 type TiSi_2 .

For these reasons, the Office Action has not established a *prima facie* case of obviousness against Claim 1 (and its dependent claims). Accordingly, the Applicant respectfully requests withdrawal of the § 103 rejection and full allowance of Claims 1 and 3-5.

III. NEW CLAIMS

The Applicant has added new Claims 21-30. The Applicant respectfully submits that no new matter has been added. The Applicant respectfully requests entry and full allowance of Claims 21-30.

IV. CONCLUSION

The Applicant respectfully asserts that all pending claims in this application are in condition for allowance and respectfully requests full allowance of the claims.

SUMMARY


If any issue arises, or if the Examiner has any suggestions for expediting allowance of this application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.

The Commissioner is hereby authorized to charge any fees connected with this communication (including any extension of time fees) or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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